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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,036	01/25/2002	Bernard Barink	TI-32595	3455

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EXAMINER	
AU, SCOTT D	

ART UNIT	PAPER NUMBER
2635	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/057,036	BARINK, BERNARD	
	Examiner	Art Unit	
	Scott Au	2635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This communication is in response to applicant's response to an Amendment, which is filed September 16, 2005.

An amendment to the claims 1-12 have been entered and made of record in the Application of Barink for a "RFID systems-antenna and software method to spatially locate transponders" filed January 25, 2002.

Claims 1-12 are pending.

Note: Examiner withdraws the 35 USC 112 based upon the support provided by the Applicant.

Response to Arguments

Applicant's amendments and argument to the rejected claims are insufficient to distinguish the claimed invention from the cited prior arts to overcome the rejection of said claims under 35 U.S.C 102(a) and 35 U.S.C 103(a) as discussed below. Applicant's amendment and argument with respected to the pending claims 1-12, filed on September 16, 2005, have been fully considered but they are not persuasive for at least the following reasons.

On page 5, third paragraph, Applicant's argument with respect to the invention of Moore in view of Zimmerman et al. that there is no reason or suggest to combine the two references, is not persuasive.

In response to Applicant's argument that there is no suggestion to combine the references, the Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. *In re Nomiya*, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971).

Moore discloses passive RFID tags are attached to the item to be tracked, remote sensing antennas (18) are placed at each remote location to be monitored, interrogators (104, 106,108) with several antenna inputs are connected to the sensing antennas to multiplex the antenna signals, and a host computer (102) communicates with the interrogators to determine item locations to an exacting measure (i.e. see Abstract).

In the same of endeavor of electronic labeling system, Zimmerman et al. disclose the CBS 16 preferably includes one transmit antenna 37 and from one to four receive antennas 38 for transmitting and receiving messages between CBS 16 and EPLs 18. If multiple antennas 38 receive the acknowledgment message, EPL locator software 22 uses basic radar tracking methods to determine the location of the EPL. In step 82, EPL locator software 22 determines whether signal strength information for the last of antennas 38 has been determined. If all CBSs 16 have been polled for signal strength information about their antennas 38, the method continues (col. 3 lines 13-18 and col.

4 lines 51-64). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to include the receiving antennas 38 of Zimmerman et al. in the remote sensing antennas (18) of Moore with the motivation for doing so would allow the controller to receive higher reception of the transponder information.

In the same field of endeavor of electronic labeling system, prior art Bhyravabhota (US# 2002/0065726) discloses the label 200 as a passive device in order to reduce cost and complexity.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1-8 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore (US# 2003/0001725) in view of Zimmerman et al. (US# 6,046,682).

Referring to claim 1, Moore discloses an apparatus for locating an RFID transponder vertical location comprising:

a passive RFID transponder (19) (i.e. RFID tag) for broadcasting identification data (page 3 paragraph 49);

a plurality of antenna (18) (i.e. an antenna at each shelf location) for receiving said identification data broadcast by said RFID transponder (19) (i.e. RFID tag) (page 3 paragraphs 46 and 49; see Figure 3);

a plurality of support members (14,16) (i.e. support locations) at spaced apart vertical locations suitable for supporting said RFID transponder (19) (i.e. RFID tag), and each of said spaced apart support members associated with at least one of said plurality of antenna (page 3 paragraph 45; see Figures 1A-2); and

control circuitry (102) (i.e. control module) connected to said plurality of antenna (18) (i.e. an antenna at each shelf location) for determining which individual antenna at different location sites of said plurality of antenna receives said identification broadcast from said RFID transponder (19) (i.e. RFID tag) and for determining the location of said RFID transponder as a function of all of the antenna (18) (i.e. an antenna at each shelf location) receiving said broadcast data and the support members (14,16) (i.e. support locations) associated with the antennae(18) (i.e. an antenna at each shelf location) receiving said identification data (pages 3-4 paragraphs 49-51; see Figures 2-3).

Furthermore, Moore discloses said identification data from said RFID transponder capable of being received by more than one antenna at different location sites (i.e. See Figure 2, each antenna 18 at different location for receiving identification from object 12).

In the same field of endeavor of electronic labeling system, Zimmerman et al. also teach said RFID transponder capable of being received by more than one antenna

at different location sites (col. 3 lines 13-18 and col. 4 lines 51-64; see Figure 5-6) in order to determine the signal strength information for the last of antennas 38.

One of ordinary skill in the art understands that antennae tracking of EPL transponders of Zimmerman et al. is desirable in the RFID tracking system of Moore because Moore teaches tracking system 100 comprises a host or control module 102 operatively connected to a plurality of interrogators 104, 106, and 108. The interrogators 104, 106, and 108 are each has a plurality of sensing antennas and circuitry 110 operatively connected to the main interrogator body by connection lines. The interrogators 104, 106, 108, are preferably local to the sensing antenna circuits 110. The sensing antenna circuits 110 are positioned so that they are in sensing proximity to a location at or over which a plurality of containers may be located or pass (i.e. page 3, paragraph 48) and Zimmerman et al. teach CBS 16 preferably includes one transmit antenna 37 and from one to four receive antennas 38 for transmitting and receiving messages between CBS 16 and EPLs 18. If multiple antennas 38 receive the acknowledgment message, EPL locator software 22 uses basic radar tracking methods to determine the location of the EPL. In step 82, EPL locator software 22 determines whether signal strength information for the last of antennas 38 has been determined. If all CBSs 16 have been polled for signal strength information about their antennas 38, the method continues (col. 3 lines 13-18 and col. 4 lines 51-64). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to include identification data from said RFID transponder capable of being received by more than one antenna at different location sites of

Zimmerman et al. in the control module of Moore with the motivation for doing so would allow the controller to receive higher reception of the transponder information.

Referring to claim 2, Moore in view of Zimmerman et al. disclose the apparatus of claim 1, Moore discloses wherein at least two transponders (19) (i.e. RFID tags) broadcast separate identification data (page 3 paragraphs 49-50).

Referring to claim 3, Moore in view of Zimmerman et al. disclose the apparatus of claim 1, Moore discloses wherein said antenna or loop antennas (18) (i.e. antennae) and the plane of the loop of the antenna is substantially coplanar with said support member (page 3 paragraph 45; see Figure 1A) (i.e. Figure 1A shown antenna (18) is coplanar to each support member (14 and 16).

Referring to claim 4, Moore in view of Zimmerman et al. disclose the apparatus of claim 1, Moore discloses wherein each of said support members (14,16) (i.e. support locations) includes at least two antennae (18) (i.e. antennae) located side by side, and wherein both the vertical and horizontal location of the transponder is determined (page 3 paragraphs 45-46; see Figures 1A-2).

Referring to claim 5, Moore in view of Zimmerman et al. disclose the apparatus of claim 1, Moore discloses wherein said RFID transponders (19) (i.e. RFID tags) are attached to a product or package (page 3 paragraph 44; see Figures 1A-2).

Referring to claim 6, Moore in view of Zimmerman et al. disclose the apparatus of claim 1, Moore discloses further comprising a multiplicity of products or packages and a multiplicity of RFID transponders (19) (i.e. RFID tags), each transponder for broadcasting different identification data, and at least one each associated with said multiplicity of products or packages (12) (i.e. plurality of containers) (page 3 paragraph 46 and 49-50; see Figure 2).

Referring to claim 7, Moore in view of Zimmerman et al. disclose the apparatus of claim 1, Moore discloses wherein said support members at known vertical locations are a plurality of shelves stacked vertically (i.e. see Figure 2).

Referring to claim 8, Moore in view of Zimmerman et al. disclose the apparatus of claim 1, Moore discloses wherein each of said shelves has two or more horizontal locations (14,16) (i.e. support locations) for supporting products or packages (12) (i.e. plurality of containers) to which a transponder (19) (i.e. RFID tag) is attached, each shelf has an antenna (18) (i.e. antenna) corresponding to said each of said horizontal locations, and wherein both the vertical and horizontal location of the transponder is determined (page 3 paragraphs 45-46; see Figures 1A-2) .

Referring to claim 11, Moore in view of Zimmerman et al. disclose the apparatus of claim 1, Zimmerman et al. disclose a computer circuitry for averaging the vertical location of antennae reading said transponder (col. 4 lines 53-64).

Claims 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore (US# 2003/0001725) in view Zimmerman et al. (US# 6,046,682) as applied to claim 1 above, and further in view of Bauer et al. (US# 2003/0174099).

Referring to claim 9, Moore in view of Zimmerman et al. disclose the apparatus of claim 1. However Moore in view of Zimmerman et al. did not explicitly disclose further including a multiplexer connected between said control circuitry and said plurality of antennas for selecting a pair of adjacent antennas.

In the same field of endeavor of inventory control system, Bauer et al. disclose a multiplexer connected between said control circuitry and said plurality of antennas for selecting a pair of adjacent antennas (page 1 paragraph 9; see Figure 2) in order to improve the spatial coverage when reading tags.

One of ordinary skill in the art understands that multiplexer of Bauer et al. is desirable in the tracking system of Moore in view of Zimmerman because Moore in view of Zimmerman et al. disclose a plurality of antennae at different location sites communicating with an RFID transponder (i.e. Moore, pages 3-4 paragraphs 45-51; see Figures 2-3 and Zimmerman et al., col. 3 lines 13-18 and col. 4 lines 51-64; see Figure 5-6) and Bauer et al. suggest two separate antennae 200a and 200b are connected to a

reader and multiplexer unit 101 (i.e. page 1, paragraph 9). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to include a multiplexer connected between said control circuitry and said plurality of antennas for selecting a pair of adjacent antennas disclosed by Bauer et al. in the RFID tracking system of Moore in view of Zimmerman et al. with the motivation for doing so would allow the control system to locate products or packages with an RFID tag attached.

Referring to claim 12, Moore in view of Zimmerman et al. disclose the method of locating an RFID transponder in space, to the extent as claimed with respect to claim 1 above. However, Moore in view of Zimmerman et al. did not explicitly disclose that it is a three-dimensional location determining.

In the same field of endeavor of inventory control system, Bauer et al. disclose determining in a three-dimensional location (page 10 paragraph 118) of tags read by RFID reader.

One of ordinary skill in the art understands that multiplexer of Bauer et al. is desirable in the tracking system of Moore in view of Zimmerman because Moore in view of Zimmerman et al. disclose a plurality of antennae at different location sites communicating with an RFID transponder (i.e. Moore, pages 3-4 paragraphs 45-51; see Figures 2-3 and Zimmerman et al., col. 3 lines 13-18 and col. 4 lines 51-64; see Figure 5-6) and Bauer et al. suggest an RFID reader detects tags in three dimensional arrangement (i.e. page 10, paragraph 117). Therefore, it would have been obvious to a

person of ordinary skilled in the art at the time the invention was made to include an RFID reader that would detect tags in a three-dimensional arrangement disclosed by Bauer et al. into RFID tags tracking system of Moore in view of Zimmerman et al. with the motivation for doing so would allow a three-dimensional detecting of RFID tags.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bhyravabhotla (US# 2002/0065726) disclose passive electronic price labels wherein the signals transmitted from the labels are being received by multiple antennas 38 of the communication base stations.

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications form the examiner should be directed to Scott Au whose telephone number is (571) 272-3063. The examiner can normally be reached on Mon-Fri, 8:30AM – 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached at (571) 272-3068. The fax phone numbers for the organization where this application or proceeding is assigned are (571)-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-305-3900.

Scott Au

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